

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method comprising:

maintaining a collection two or more variants of a documents, each of the documents represented by a unique logical information object (LOIO), the content of each of the two or more variants of the document being contained in a respective one of two one or more physical information objects (PHIOs) belonging to each unique LOIO, each of the PHIOs containing a variant of the content of the document represented by the PHIO's respective LOIO, each context being defined by a tuple of  $n$  attribute values for  $n$  attributes, where  $n > 1$ ;

storing a set of  $m$  maps  $R_i$ ,  $1 \leq i \leq m$ , where:

$m$ , the number of maps, is at least as large as  $n$ , the number of attributes,

each map  $R_i$  defines a mapping from the set of all possible contexts to the set of all possible contexts, each context being defined by a tuple of  $n$  attribute values for the  $n$  attributes,

each map  $R_i$  is undefined for at least one context in the set of all possible contexts,  
whereby each map  $R_i$  is recursion free, and

the maps have an order from  $R_1$  through  $R_m$ ;

receiving an entry context and a request for a first the document in the collection, the entry context being defined by a tuple of  $n$  attribute values for the  $n$  attributes; and an entry context, the entry context specifying a respective value for each of one or more attributes;

defining a sequence of contexts that begins with the entry context from the set of  $m$  maps, each successive context in the sequence of contexts being derived from the preceding context in the sequence of contexts by application of one of the maps, the applied map in each derivation being the first of the maps that is not defined for the proceeding context in the sequence of contexts;

selecting a PHIO having a context that occurs in the sequence of contexts before the contexts of any other of the two or more PHIOs; and

~~determining a suitable PHIO belonging to a first LOIO, the first document being represented by the first LOIO, the suitable PHIO having attribute values matching the context entry if such a PHIO belongs to the first LOIO, and if no such PHIO belongs to the first LOIO, the suitable PHIO having attribute values matching a derived context, the derived context being generated by one or more successive applications to the entry context of one or more successively selected maps selected from a plurality of maps, each application of a map mapping a first attribute value to a second attribute value in the entry context or a derived context; and providing the suitable selected PHIO in response to the request for the first document.~~

2. (Original) The method of claim 1 wherein the request is through a hyperlink.
3. (Previously presented) The method of claim 1 wherein the attributes include one or more of a name of a component, a version of the component, a language or a country.
- 4-8. (Cancelled)
9. (Currently amended) The method of claim 1 wherein the application of one of the [[a]] maps to an input context produces a corresponding output context by changing~~changes~~ a single attribute value or ~~the application of a map changes~~ a pair of attribute values of the input context, the map providing a dimension in which neighboring relations with respect to an attribute or a combination of attributes are defined.

10. (Currently amended) A computer program product, tangibly embodied in a machine-readable storage device, the computer program product being operable to cause data processing apparatus to:

maintain a collection of two or more variants of a documents, each of the documents represented by a unique logical information object (LOIO), the content of each of the two or more variants of the document being contained in a respective one of two or more physical information objects (PHIOs) belonging to each unique LOIO, each of the PHIOs containing a variant of the content of the document represented by the PHIO's respective LOIO, each context being defined by a tuple of  $n$  attribute values for  $n$  attributes, where  $n > 1$ ;

store a set of  $m$  maps  $R_i$ ,  $1 \leq i \leq m$ , where:

$m$ , the number of maps, is at least as large as  $n$ , the number of attributes,

each map  $R_i$  defines a mapping from the set of all possible contexts to the set of all possible contexts, each context being defined by a tuple of  $n$  attribute values for the  $n$  attributes,

each map  $R_i$  is undefined for at least one context in the set of all possible contexts, whereby each map  $R_i$  is recursion free, and

the maps have an order from  $R_1$  through  $R_m$ ;

receive an entry context and a request for a first the document in the collection, the entry context being defined by a tuple of  $n$  attribute values for the  $n$  attributes; and an entry context, the entry context specifying a respective value for each of one or more attributes;

define a sequence of contexts that begins with the entry context from the set of  $m$  maps, each successive context in the sequence of contexts being derived from the preceding context in the sequence of contexts by application of one of the maps, the applied map in each derivation being the first of the maps that is not defined for the proceeding context in the sequence of contexts;

select a PHIO having a context that occurs in the sequence of contexts before the contexts of any other of the two or more PHIOs; and

~~determine a suitable PHIO belonging to a first LOIO, the first document being represented by the first LOIO, the suitable PHIO having attribute values matching the context entry if such a PHIO belongs to the first LOIO, and if no such PHIO belongs to the first LOIO, the suitable PHIO having attribute values matching a derived context, the derived context being generated by one or more successive applications to the entry context of one or more successively selected maps selected from a plurality of maps, each application of a map mapping a first attribute value to a second attribute value in the entry context or a derived context; and provide the suitable selected PHIO in response to the request for the first document.~~

11. (Original) The computer product of claim 10 wherein the request is through a hyperlink.

12-13. (Cancelled)

14. (Currently amended) The computer product of claim 10 wherein the application of one of the [[a]]-maps to an input context produces a corresponding output context by changing ~~changes~~ a single attribute value or ~~the application of a map changes a pair of attribute values of the input context~~, the map providing a dimension in which neighboring relations with respect to an attribute or a combination of attributes are defined.

15. (Currently Amended) A system for maintaining a database, the system comprising:

means for maintaining a collection two or more variants of a documents, each of the documents represented by a unique logical information object (LOIO), the content of each of the two or more variants of the document being contained in a respective one of two one or more physical information objects (PHIOs) belonging to each unique LOIO, each of the PHIOs containing a variant of the content of the document represented by the PHIO's respective LOIO, each context being defined by a tuple of  $n$  attribute values for  $n$  attributes, where  $n > 1$ ;

means for storing a set of  $m$  maps  $R_i$ ,  $1 \leq i \leq m$ , where:

$m$ , the number of maps, is at least as large as  $n$ , the number of attributes,

each map  $R_i$  defines a mapping from the set of all possible contexts to the set of all possible contexts, each context being defined by a tuple of  $n$  attribute values for the  $n$  attributes,

each map  $R_i$  is undefined for at least one context in the set of all possible contexts, whereby each map  $R_i$  is recursion free, and

the maps have an order from  $R_1$  through  $R_m$ ;

means for receiving an entry context and a request for a first the document in the collection, the entry context being defined by a tuple of  $n$  attribute values for the  $n$  attributes; and an entry context, the entry context specifying a respective value for each of one or more attributes;

means for defining a sequence of contexts that begins with the entry context from the set of  $m$  maps, each successive context in the sequence of contexts being derived from the preceding context in the sequence of contexts by application of one of the maps, the applied map in each derivation being the first of the maps that is not defined for the proceeding context in the sequence of contexts;

means for selecting a PHIO having a context that occurs in the sequence of contexts before the contexts of any other of the two or more PHIOs; and

~~means for determining a suitable PHIO belonging to a first LOIO, the first document being represented by the first LOIO, the suitable PHIO having attribute values matching the context entry if such a PHIO belongs to the first LOIO, and if no such PHIO belongs to the first LOIO, the suitable PHIO having attribute values matching a derived context, the derived context being generated by one or more successive applications to the entry context of one or more successively selected maps selected from a plurality of maps, each application of a map mapping a first attribute value to a second attribute value in the entry context or a derived context; and~~

means for providing the suitable selected PHIO in response to the request for the first document.

16. (Original) The system of claim 15 wherein the request is through a hyperlink.

17. (Previously presented) The system of claim 15 wherein the attributes include one or more of a name of a component, a version of the component, a language or a country.

18-19. (Cancelled)

20. (Currently amended) The system of claim 15 wherein the application of one of the [[a]] maps to an input context produces a corresponding output context by changing~~changes~~ a single attribute value or ~~the application of a map changes a pair of attribute values of the input context,~~ the map providing a dimension in which neighboring relations with respect to an attribute or a combination of attributes are defined.